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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,776	08/19/2005	Marina Dupcinov	3670-57	6329
23117 7590 10/05/2009 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203				
EXAMINER				
CHAN, RICHARD				
ART UNIT		PAPER NUMBER		
2618				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/528,776

**Applicant(s)**

DUPCINOV ET AL.

**Examiner**

RICHARD CHAN

**Art Unit**

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11/07/08.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/55/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 11/07/08 have been fully considered but they are not persuasive.

The applicant contends that the examiner does not point out what specifically in Balogh corresponds to the claimed first and second predetermined signal strength thresholds.

The examiner however specifically disclosed wherein the Balogh reference, specifically (Page 1, Para 0007-0009 and Page 4, Para 0035 of Balogh) wherein a table is maintained with a predetermined threshold values and a determining section is used to compare the first signal to a first predetermined signal strength threshold and signal levels of the first and the second access point are compared and it is checked if the difference of signal levels of the first access points are compared and checked if the difference is greater than a predetermined signal limit. (if the signal strength of the first signal exceeds the first predetermined signal strength threshold, maintaining the second node in the table, and if the signal strength of the first signal does not exceed the first predetermined signal strength threshold, discarding the first signal. (Pages 1-2, Para 0010 of Balogh

The Balogh table which corresponds to the adding and dropping of nodes adds and drops nodes by deciding which access point to use in order to access a network.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nuemiller et al. (US Patent 7180875), Liu et al. (US Patent 7184421), and further in view of Balogh (US Pub 2001/0024953).

As for claim 1, Nuemiller et al. teaches a method for use by a first node in an ad-hoc Wireless Local Area Network (WLAN) which first node maintains a table of other nodes within the network which can be used for forwarding messages within the network (Abstract; Col. 3, line 48-Col. 4, line 29; Col. 5, line 39-Col. 6, line 8; Col. 6, lines 17-43 of Nuemiller et al.) receiving a first signal from a second node (Col. 1, lines 29-50 and Col. 5, line 39-Col. 6, line 43 of Nuemiller et al.) if the second node is already listed in the table maintained by the first node (Col. 7, lines 55-59 of Nuemiller et al.)

What Nuemiller et al. does not explicitly teach is adding the second node to the table.

However, Lui et al. teaches an ad-hoc Wireless Local Area Network (WLAN) comprising of: if the signal strength of the first signal exceeds ~~either the first or second~~ predetermined ~~comparison level~~ signal strength threshold, adding the second node to the table, and if the signal strength of the first signal does not exceed the second

predetermined signal strength threshold, discarding the first signal and continuing to not list the second node in the table. (Fig. 4; Fig. 10; Col. 8, line 41-Col. 9, line 3; Col. 13, line 41-Col. 14, line 29; and Col. 20, lines 22-47 with respect to Fig. 14; Col. 14, line 33-Col. 15, line 4; Col. 24 line 22-Col. 25, line 67 of Lui et al.)

What Nuemiller et al. does not explicitly teach is the comparison of predetermined level/conditions.

However, Balogh teaches an ad-hoc Wireless Local Area Network (WLAN) comprising of: analyzing the first signal to determine its strength (Page 1, Para 0006-0007 of Balogh); determining if the second node is already listed in the table maintained by the first node, comparing the signal strength of the first signal to a first predetermined ~~comparison level~~ signal strength threshold (Page 1, Para 0007-0009 and Page 4, Para 0035 of Balogh); and signal levels of the first and the second access point are compared and it is checked if the difference of signal levels of the first access point and the second access point is above the pre-determined signal level limit; which reads on claimed if the signal strength of the first signal exceeds the first predetermined signal strength threshold, maintaining the second node in the table, and if the signal strength of the first signal does not exceed the first predetermined signal strength threshold, discarding the first signal. (Pages 1-2, Para 0010 of Balogh), the second access point with better connection attributes; which reads on claimed if the second node is not listed in the table maintained by the first node, comparing the signal strength of the first signal to a second predetermined strength threshold comparison level greater than the first predetermined signal strength threshold. (Page 6, Para 0050 of Balogh).

It would have been obvious to one of ordinary skill of the art at the time the invention was made to incorporate the equipment for supporting mobility in telecommunication system, as taught by Balogh, in the method for distribution of routes for routing data packets in Ad-Hoc networks of Nuemiller et al., because Nuemiller et al. already teaches messaging type selected by a mobile terminal (or node) varies based on the mobility of the communicating terminals (Col. 8, lines 26-67 of Nuemiller et al.). In addition, it would have been obvious to one of ordinary skill of the art at the time the invention was made to incorporate a way to maintain network configuration hierarchy information and flexible mechanisms for establishing routes and transferring information between nodes in ad-hoc data communication networks using on-demand multicast and unicast techniques as taught by Lui et al., in the method for distribution of routes for routing data packets in Ad-Hoc networks of Nuemiller et al., because both Lui et al. and Nuemiller et al. teach a network configuration hierarchy information is maintained using flexible mechanisms and methods for establishing routes and transferring information between nodes in ad-hoc data communication networks.

The motivation of this combination would be capable of effectively and efficiently handling fading between mobile wireless user terminals of a packet-switched network with minimal overhead and packet loss in a communications network, as taught by Nuemiller et al. in Abstract. The incorporation would facilitate the mobility of users in a telecommunication system with a plurality of networks (Page 1, Para 0001 of Balogh). The incorporation would also efficiently rout both multicast and unicast messages in

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communications networks of mobile communications nodes (Col. 1, lines 9-14 of Lui et al.).

As for claim 2, Nuemiller et al. teaches a method for use by a first node in an ad-hoc Wireless teaches a method for use by a first node in an ad-hoc Wireless Local Area Network (WLAN) which first node maintains a table of other nodes within the network which can be used for forwarding messages within the network, applied in an Ad-Hoc On-demand Distance Vector (AODV) system (Col. 7, lines 10-17 and Col. 8, lines 10-25 of Nuemiller et al.).

As for claim 3, Balogh teaches a method for use by a first node in an ad-hoc Wireless Local Area Network (WLAN) which first node maintains a table of other nodes within the network which can be used for forwarding messages within the network, applied in an IEEE 802.11 – type system (Fig. 1 and Page 2, Para 0018 & 0021-0022 of Balogh).

Regarding claim 4, see explanation as set forth regarding claim 1 (method claim) because the claimed first node in an ad-hoc Wireless Local Area Network (WLAN) would perform the method steps.

Regarding claim 5, see explanation as set forth regarding claim 2 (method claim) because the claimed first node in an ad-hoc Wireless Local Area Network (WLAN) would perform the method steps.

Regarding claim 6, see explanation as set forth regarding claim 3 (method claim) because the claimed first node in an ad-hoc Wireless Local Area Network (WLAN) would perform the method steps.

As for claim 7 (new), Nuemiller et al. teaches a wherein the first and second predetermined signal strength thresholds correspond to first and second predetermined signal-to-noise ratios (SNRs). (Col. 7, line 10-Col. 8, line 9 of Nuemiller et al.)

Regarding claim 8 (new), see explanation as set forth regarding claim 7 (method claim) because the claimed first node in an ad-hoc Wireless Local Area Network (WLAN) would perform the method steps.

### ***Conclusion***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to RICHARD CHAN whose telephone number is (571)272-0570. The examiner can normally be reached on Mon - Fri (9AM - 5PM).



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on (571)272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nay A. Maung/  
Supervisory Patent Examiner, Art Unit 2618

/Richard Chan/  
Examiner, Art Unit 2618